



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,559	03/11/2004	Joe T. Minarovic	JTM011	7770

7590 09/19/2005
Jack V. Musgrove
2911 Briona Wood Lane
Cedar Park, TX 78613

EXAMINER

PREVIL, DANIEL

ART UNIT	PAPER NUMBER
----------	--------------

2636

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/799,559

Applicant(s)

MINAROVIC, JOE T.

Examiner

Daniel Previl

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-13, 18-20, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 6-8, 14-17 and 21-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claims 1-27 are presented for examination.

Specification

1. The abstract of the disclosure is objected to because the abstract is too long.

Correction is required. See MPEP § 608.01(b).

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 18 is rejected under 35 U.S.C. 102(b) as being anticipated by Hayday (US 4,932,910).

Regarding claim 18, Hayday discloses a surface tracker (fig. 2) comprising: a tubular marker body having an interior chamber, a lower end, and an upper end (fig. 2-

fig. 3); an electronic marker located inside interior chamber of tubular marker body (fig. 2-fig. 3); a visual indicator 32 attached to upper end of tubular marker body and extending away from tubular marker body (fig. 3).

5. Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Eslambolchi et al. (US 5,949,373).

Regarding claim 26, Eslambolchi discloses a method of tracking a particular field location, comprising the steps of: burying a tracker at the particular field location, the tracker having an electronic marker (abstract) determining global positioning satellite (GPS) coordinates of the buried tracker using a GPS receiver located at the particular field location (fig. 1; col. 3, lines 8-32); recording a log entry indicative of the GPS coordinates (abstract; fig. 1; col. 3, lines 27-33); after burying, determining and recording, establishing a vicinity of the tracker using the log entry (col. 3, lines 27-39); and locating the tracker by sensing the electronic marker at the vicinity of the tracker with an electronic receiver (col. 3, lines 33-53; col. 4, lines 1-11).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2636

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1- 2, 4-5, 9-10, 12-13, 19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayday (US 4,932,910) in view of Minarovic (US 6,049,279).

Regarding claim 1, Hayday discloses a method of manufacturing a surface tracker (fig. 2) comprising the steps of: inserting an electronic marker in a marker body (fig. 2; col. 4, lines 40-43); the electronic marker being adapted to emit a locating signal (col. 2, lines 31-34; col. 4, lines 59-66) and attaching a visual indicator (light 32) (fig. 2) to marker body, said visual indicator (light 32) (fig. 2) extending away from marker body (fig. 1-fig. 3; col. 8, lines 42-68).

Hayday discloses all the limitations above but fails to explicitly disclose the step of sealing the electronic marker within the marker body.

However, Minarovic discloses the step of sealing the electronic marker within the marker body (col. 4, lines 66-67; col. 5, lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Minarovic's sealing the electronic marker in Hayday. Doing so would modify Hayday's system with Minarovic's sealing the electronic marker to prevent water, dust, dirt from entering inside the electronic marker, thereby enhancing the system performance by detecting and locating accurately objects for economical purposes as taught by Minarovic (col. 1, lines 7-67).

Regarding claims 2, 10, Hayday discloses the marker body is elongated (3) and attaching the visual indicator (light 32) in such a manner that the visual indicator (light 32) extends away from the marker body along a longitudinal axis thereof (fig. 3).

Regarding claims 4, 5, 13, Hayday and Minarovic disclose all the limitations in claim 1 and Minarovic further discloses screwing an end cap onto an open of the marker body (fig. 2). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Minarovic's end cap in Hayday. Doing so would modify Hayday's system with Minarovic's end cap to prevent water, dust, dirt from entering inside the electronic marker, thereby enhancing the system performance by detecting and locating accurately objects for economical purposes as taught by Minarovic (col. 1, lines 7-67).

Regarding claim 9, Hayday discloses an article (fig. 2) comprising: a casing (fig. 2-fig. 3) and a visual indicator 32 attached to and extending away from casing (fig. 3).

Hayday discloses the limitations above but fails to explicitly disclose an electronic marker seal in an interior portion of casing.

However, Minarovic discloses an electronic marker seal in an interior portion of casing (col. 4, lines 66-67; col. 5, lines 1-6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Minarovic's sealing the electronic marker in Hayday. Doing so would modify Hayday's system with Minarovic's sealing the electronic marker to prevent water, dust, dirt from entering inside the electronic marker, thereby enhancing the system performance by detecting and locating accurately objects for economical purposes as taught by Minarovic (col. 1, lines 7-67).

Regarding claim 12, Hayday and Minarovic disclose all the limitations in claim 9 and Minarovic further discloses passive electronic marker (col. 2, line 65). Thus, it would

have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Minarovic's passive marker in Hayday. Doing so would modify Hayday's system with Minarovic's passive in order to save energy, thereby users can reduce energy and maintenance cost as taught by Minarovic (col. 2, lines 10-28).

Regarding claim 19, Hayday and Minarovic disclose all the limitations in claim 18 and Minarovic further discloses lower end of tubular marker body has an opening and further comprising an end cap which seals opening (fig. 2). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Minarovic's end cap in Hayday. Doing so would modify Hayday's system with Minarovic's end cap to prevent water, dust, dirt from entering inside the electronic marker, thereby enhancing the system performance by detecting and locating accurately objects for economical purposes as taught by Minarovic (col. 1, lines 7-67).

8. Claims 3, 11, 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayday in view of Minarovic and further in view of Clark, Jr. et al. (US 5,532,598).

Regarding claims 3, 11, 20, Hayday and Minarovic disclose all the limitations in claim 1 but fail to explicitly disclose inserting ferrite core assembly with a longitudinal axis thereof generally parallel to a longitudinal axis of the marker body.

However, Clark discloses inserting ferrite core assembly with a longitudinal axis thereof generally parallel to a longitudinal axis of the marker body (fig. 10, col. 7, lines 64-67; col. 8, lines 1-15).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Clark's ferrite core in Hayday and Minarovic in order to detect and locate structure of difficult accessibility, thereby increasing the system performance by eliminating the accidental damage as taught by Clark (col. 1, lines 15-48).

9. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eslambolchi et al. (US 5,949,373) in view of Hayday (US 4,932,910).

Regarding claim 27, Eslambolchi discloses all the limitations above but fails to explicitly disclose a visual indicator extending away from a marker body, and burying generally buries the marker body while leaving the visual indicator above ground.

However, Hayday discloses a visual indicator 32 extending away from a marker body, and burying generally buries the marker body while leaving the visual indicator above ground (fig. 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Hayday's visual indicator in Eslambolchi. Doing so would modify Eslambolchi's system with Hayday's visual indicator in order to detect and locate accurately objects, thereby users can save time and money as taught by Hayday (col. 5, lines 55-65).

Allowable Subject Matter

10. Claim 25 is allowed.
11. Claims 6-8, 14-17, 21-24, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. The following is a statement of reasons for the indication of allowable subject matter: The prior arts fail to teach or make obvious: a plurality of resilient filaments, folding the filaments where they pass through the hole, and securing the filaments to the end of the marker body.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
Fleischhacker, Jr. (US 5,984,877) discloses a guide wire marker technique and coil spring marker technique.
Miranovic (US 6,133,738) discloses a detectable transponder reel housing.
Miller (US 6,421,928) discloses a device for locating attachment points.
Watts et al. (US 6,933,438) discloses a duct with wire locator.

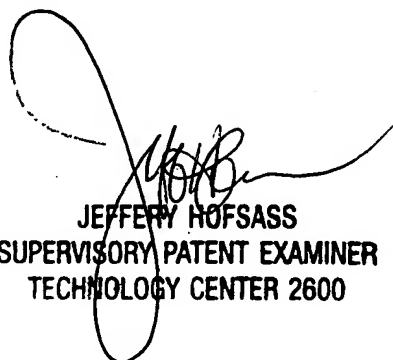
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Previl whose telephone number is (571) 272-2971. The examiner can normally be reached on Monday-Thursday. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (571) 272-2981. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Previl
Examiner
Art Unit 2636

DP
September 14, 2005.



JEFFERY HOFSSASS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600